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EXAMINER	
CALANDRA, ANTHONY J	
ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Advisory Action Addendum

Request for Reconsideration

112 2nd rejections

The applicant maintains that in the present invention the laccase activity was determined using ABTS as a substrate at room temperature using a pH of 4.5. The applicant argues the specific conditions. The applicant asks for reconsideration of the rejection in view of evidentiary reference NIKU-PAAVULA.

The applicant now argues that the laccase activity was determined using ABTS as a substrate, at room temperature and using a pH of 4.5. This conflicts with the applicant's previous arguments dated 12/08/2009 which stated that the specific condition is determined based upon the specific conditions of each chemical reaction [pg. 4 lines 1 and 2] and then even conflicts with the sentence in the current arguments "*The specific conditions of each chemical reaction are described in the working examples so that enzyme activity can be calculated in katals for each condition*". Either laccase activity is determined based upon a specific set of conditions or on varying conditions.

Further, the applicant's specification makes no mention of this newly defined method of determining laccase based upon ABTS at a pH of 4.5 and room temperature anywhere in the specification. Therefore the applicant fails to provide support for the first interpretation.

The applicant's argument that the determination of enzyme activity is based on each individual experiment is not supported by written description anywhere in the specification. Even giving the applicant this argument the claim would still be rejected based on 112 2nd. Since the applicant lists multiple conditions at which the reaction can take place [pg. 8 lines 4-12] and multiple reactants the claim language has no limit as to what 'nkat' can define as activity will change depending on different conditions as such 'nkat' is defined relatively. A claim term must be defined based on a standard that is recognizable to the person of ordinary skill in the art not a moving target.

The art provided by the applicant shows that an enzyme activity is defined at a specific temperature, with a specific substrate, at a specific pH, and specific time/substrate consumption [pg. 1988 column 1 paragraph 1].

Art rejections

BART, alone

Applicant argues that the chemical polymerization of a chemical polymer is followed by a coating of a fibrous structure and therefore the polymerizing chemicals such as APS are never in direct contact with the fibrous material and therefore there is no oxidation of phenolic groups on the fiber.

BART states the fibers are oxidized by disclosing treating the fibers with an oxidant to initiate polymerization including ammonium persulfate and ferric chloride [column 4 lines 5-9]. BART discloses that the slurry of fibers is mixed with the monomer and polymerization occurs via addition of said oxidant [column 6 lines 30-35]. BART also discloses that for the coating embodiment the system can progress by either the absorption of the monomer or polymer [column 7 lines 63-65]. The absorption of a monomer falls within the applicants 'bonding language. Therefore the applicant's argument that the fibers are never in contact with the oxidant is not well taken. Finally the examiner notes that bleached fibers may be treated with the process [column 6 table 1]; bleached fibers are oxidized fibers.

The examiner has interpreted the term bonding broadly as physical, chemical, or sorption (adsorption or absorption) bonding. This broad interpretation is supported in light of the specification which states that bonding as defined therein includes chemical, physical, or chemi-physical sorption [Specification lines 9-10].

BART in view of PEDERSON

Applicant argues that the chemical oxidants do not graft the monomer onto the fiber.

As stated early binding/bonding reasonably included absorption/adsorption in light of the specification. It is believed that the applicant means to limit the claims to a chemical type bond, however, the claims do not contain this limitation.

Applicant argues that the claim invention requires an oxidizing agent in the presence of an enzyme in step (a) and an oxidizing agent in step (c).

This argument is not commensurate with the claims.

PEDERSON, alone

Applicant argues that PEDERSON does not disclose that a modified fiber is polymerized in the presence of an oxidizing agent in such a way that one end of the polymer chain is attached to the primered matrix of the fiber.

PEDERSON discloses phenylene diamine. The applicant has shown that aniline polymerizes in the presence of oxidants [specification pg. 14 lines 5-10]. Phenylene diamine is aniline with a second NH2 group attached. The applicant also suggests that aniline is compatible with the activated bi-functional groups of the fiber [specification pg. 9 lines 1-6]

Therefore as aniline and the derivative phenylene diamine can polymerize and are compatible with the oxidized fiber PEDERSON meets the claim limitation when the bi-functional primer and conductive monomer are the same.

Applicant argues that claim 11 states that the bi-functional substance and monomer are different.

In the rejection to claim 11 the examiner suggests the combination of both phenylene diamine with other substances that PEDERSON states can be used. For example PEDERSON states that more than one type of phenylene diamine can be used. Therefore when using a combination of two types of phenylene diamine in PEDERSON one type can act as the bi-functional substance while the other phenylene diamine acts as the monomer.

PEDERSON in view of BART

Applicant argues that PEDERSON does not disclose a bi-functional group to be used as a primer to attach a conductive polymer.

PEDERSON discloses that a substance such as phenolic compounds with carboxylic acid can be bonded to the surface. This increases the charge of the fiber and allows other substances to better bond to the fiber via increased charge density [column 3 lines 25-30]. Therefore the person of ordinary skill in the art would expect the subsequent addition of the compounds of BART to be better attracted to the fiber of PEDERSON.

/Anthony J Calandra/

Examiner, Art Unit 1791

/Eric Hug/

Primary Examiner, Art Unit 1791